

60, 70 and 70A Loaders



JOHN DEERE

OPERATORS MANUAL

60, 70 and 70A
Loaders

OMM79638 Issue J9 English

John Deere Horicon Works

OMM79638 Issue J9

(This manual replaces OMM79638 F9)

LITHO IN U.S.A.
ENGLISH



Introduction

THANK YOU for purchasing a John Deere product.

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction the implement will travel when going forward.



THIS MACHINE is of metric design.

Measurements in this manual are metric with the customary U.S. measurement following. Use only metric hardware and tools as specified.

WRITE PRODUCT IDENTIFICATION NUMBERS in the space provided in the Specifications section. Accurately record all the numbers to help in tracing

the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

PART NUMBERS may differ outside the U.S. See your John Deere dealer.



JUN-12JAN89

M41889

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All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

OMM79638-19-14SEP89

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Safety

RECOGNIZE SAFETY INFORMATION

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



O53,ALERT -19-16JUN87

T81389 -UN-07DEC88

UNDERSTAND SIGNAL WORDS

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

Safety signs with signal word DANGER or WARNING are typically near specific hazards.

General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

⚠ DANGER

⚠ WARNING

⚠ CAUTION

O53,SIGNAL -19-07OCT85

TS187 -19-30SEP88

FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.



O53,READ -19-23APR87

TS201 -UN-23AUG88



INSPECT LOADER BEFORE OPERATION

Safety devices must be in good condition and fastened in place.

Check for loose, worn, damaged, or missing parts.

Check lines and fittings for oil leaks.

Check lubrication points.

Check adjustments of:

- Pins
- Bucket
- Wedge
- Other

MX,SACN,A -19-12DEC88

PROTECT PEOPLE AND ANIMALS

Be alert for children at all times when you operate loader, especially:

- When you back the tractor.
- When bucket may block your view forward.

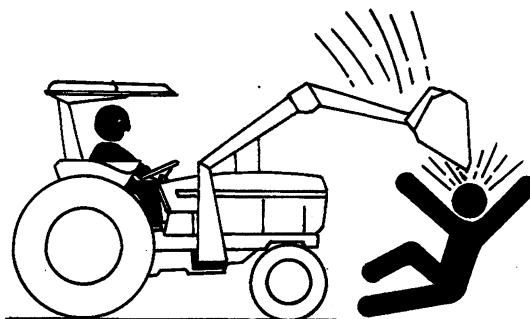
Clear people and pets out of work area.

Do not allow anyone to walk or work under a raised loader.

Do not lift or carry anyone on loader or in bucket or attachment.



M41274 -UN-06SEP88



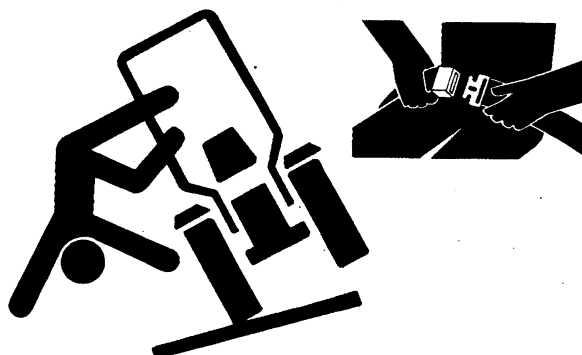
W14235 -UN-05OCT88

MX,SACN,B -19-12DEC88

USE SEAT BELT PROPERLY

Use a seat belt when you operate with a roll-over protective structure (ROPS) to minimize chance of injury from an accident such as an overturn.

Do not use a seat belt if you operate tractor/loader without a ROPS.



TS205 -UN-23AUG88

O53,ROPS1 -19-23APR87

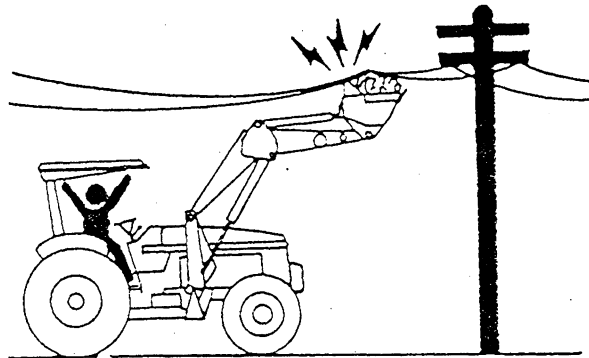


AVOID POWER LINES

Serious injury or death can result from contact with electric lines. Avoid contact with electric lines when you move or operate loader.

Be aware of clearance between loader and other objects when you raise loader.

Do not dismount from tractor if any part of tractor or loader is in contact with a power line.



MX,SACN,C -19-12DEC88

M61942 -JUN-05/JAN89

OPERATE LOADER SAFELY

Allow for added length of loader on tractor when you turn.

Do not travel at any speed which does not permit adequate control of steering and stopping.

Operate loader only from operator's seat. When you raise or lower loader, stay at controls until operation is complete. Avoid fast rate of drop.

Do not use loader:

- For handling round bales.
- As a battering ram.
- For towing.
- As a work platform.

Do not exceed lift capacity of loader.

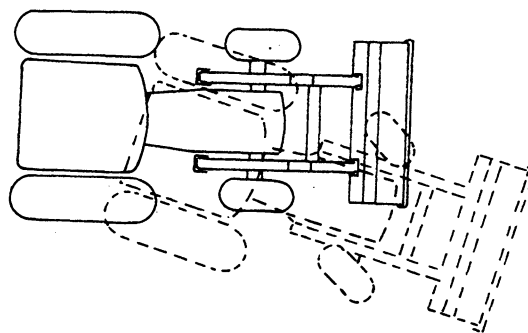
Carry load low at all times.

Travel slowly:

- On rough ground.
- When you make a turn.
- When you drive through a doorway or gate.

Be very careful when you operate loader on a slope.

Avoid holes, ditches, and obstacles which may cause tractor/loader to tip.



MX,SACN,D -19-12DEC88

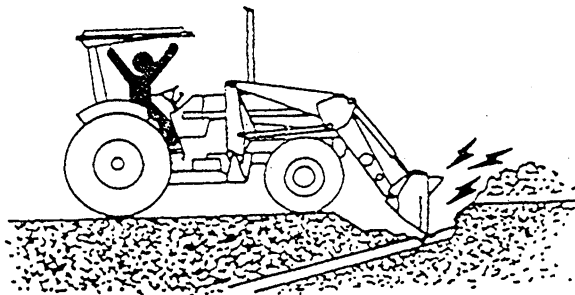
W11378 -JUN-06/OCT88



DIG SAFELY

Before you dig, check location of electrical cables, gas lines, and water lines.

Do not dismount from tractor if any part of tractor/loader is in contact with a cable.



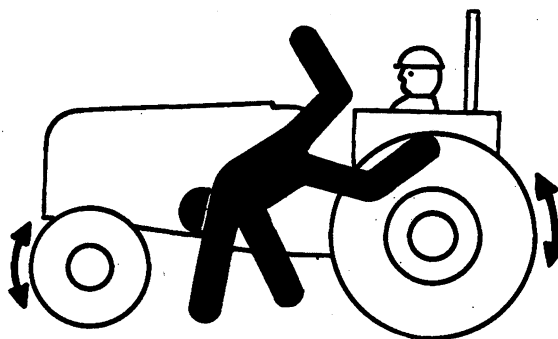
MX,SACN,E -19-12DEC88

M61941 -UN-05JAN89

KEEP RIDERS OFF MACHINE

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off the machine. Riders also obstruct the operator's view, resulting in the machine being operated in an unsafe manner.



O53,RIDER -19-03MAY88

TS290 -UN-23AUG88

SERVICE LOADER SAFELY

Before you service loader:

- Lower loader to ground.
- Move control lever(s) to all four positions to relieve hydraulic pressure.
- Lock park brake.
- Stop engine.
- Remove key.

Do not work under raised loader unless it is safely supported with blocks, stands, or hoist, etc.

Before you disconnect lines, relieve hydraulic pressure: move control lever(s) to all four positions.

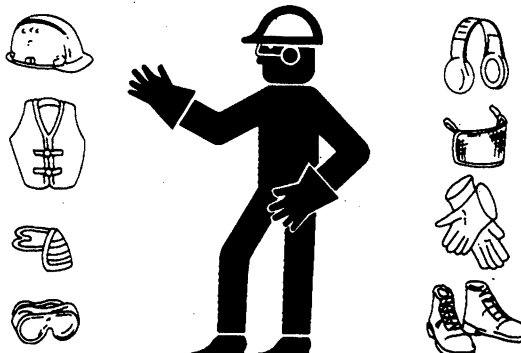
MX,SACN,F -19-12DEC88

WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



O53,WEAR -19-23APR87

TS206 -UN-23AUG88



PRACTICE SAFE MAINTENANCE

Understand service procedure before you do the work.
Keep area clean and dry.

Do not lubricate or service machine while it is moving.

Keep hands, feet, and clothing from power-driven parts.

Disengage all power and operate controls in all four positions to relieve pressure.

Lower equipment to ground. Stop engine. Remove key.
Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed.
Fix damage immediately. Replace worn or broken parts.
Remove any buildup of grease, oil, or debris.

Disconnect battery ground cable (—) before you weld loader.



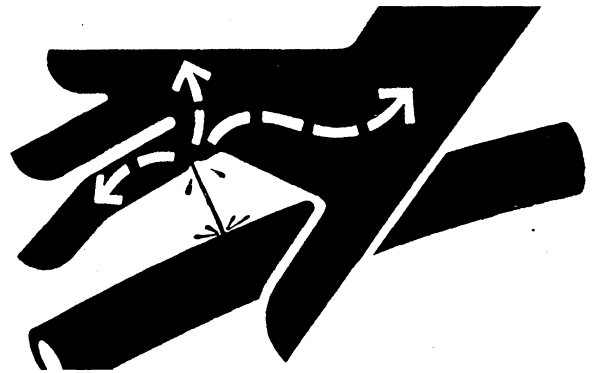
O53,SERV -19-21DEC87

TS218 -UN-23AUG88

AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before unhooking hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard to search for leaks.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.

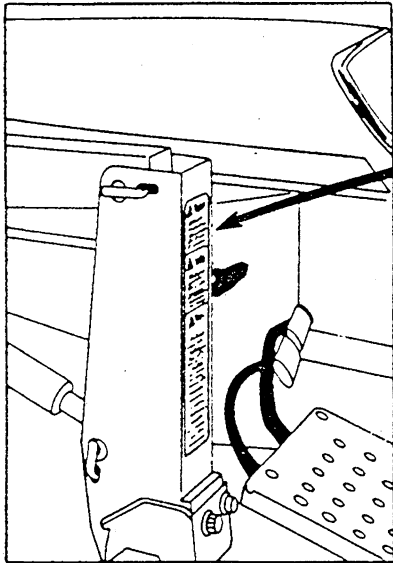


O53,FLUID -19-18SEP87

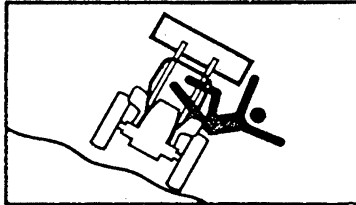
X9811 -UN-23AUG88



READ SAFETY SIGNS



⚠ WARNING



Tractor rollover from instability can cause serious injury or death.

- Add recommended rear wheel and rear tractor ballast.
- Move rear wheels to widest setting.
- Transport with liftarms at low position.
- Operate and turn at slow speeds.
- Use of ROPS and seat belt is recommended.

⚠ WARNING

Falling loads can cause serious injury or death. Do not handle round bales, loose or shiftable loads with this loader.

⚠ WARNING

Electrical shock can cause serious injury or death. Avoid contact with overhead and underground electric lines.

⚠ CAUTION

- Lock loader latches before operating.
- Lower loader to ground when parked.
- Do not stand or work under raised loader.
- Do not work from raised loader.
- Keep others off loader and attachments.
- Before servicing, adjusting equipment or disconnecting oil lines:
 - a) Lower loader to ground or support liftarm.
 - b) Shut off engine and relieve hydraulic pressure.
- Observe safety recommendations in Loader Operator's Manual.

C.O.

M61559 -19-13MAR89

MX,SACN,G -19-12DEC88

Controls

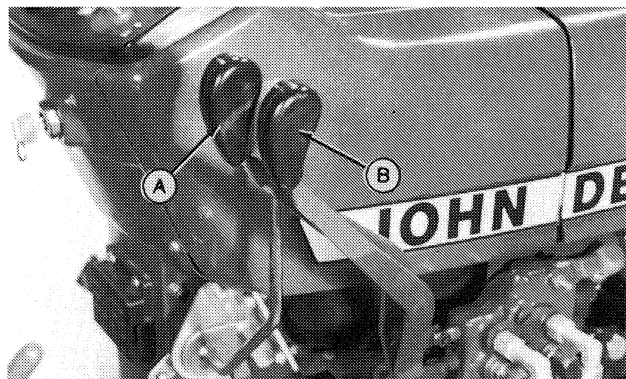
OPERATING LOADER CONTROL LEVERS—650 AND 750 TRACTORS

Move lever (A):

- REARWARD TO RAISE BUCKET.
- FORWARD TO LOWER BUCKET.

Move lever (B):

- REARWARD TO ROLL BUCKET BACK.
- FORWARD TO DUMP BUCKET.



MX,CTCN,A -19-12DEC88

W13463 -UN-06OCT88

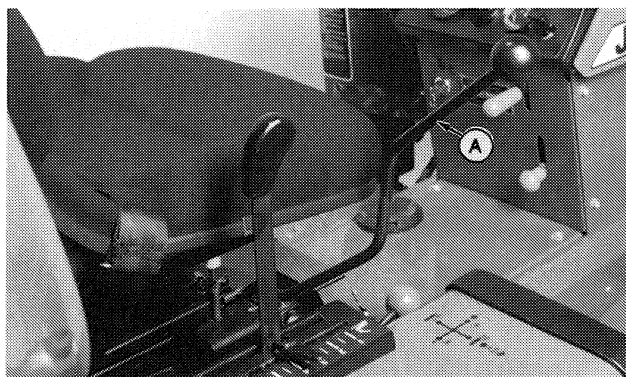
OPERATING LOADER CONTROL LEVER—655, 755, 855, AND 955 TRACTORS

Move lever (A):

- FORWARD TO LOWER BUCKET.
- REARWARD TO RAISE BUCKET.
- RIGHT TO DUMP BUCKET.
- LEFT TO ROLL BACK BUCKET.

The farther you move control lever in any direction, the faster the loader moves.

When you release lever, it will return to neutral and stop loader movement.



MX,CTCN,B -19-12DEC88

TY14091 -UN-23AUG88

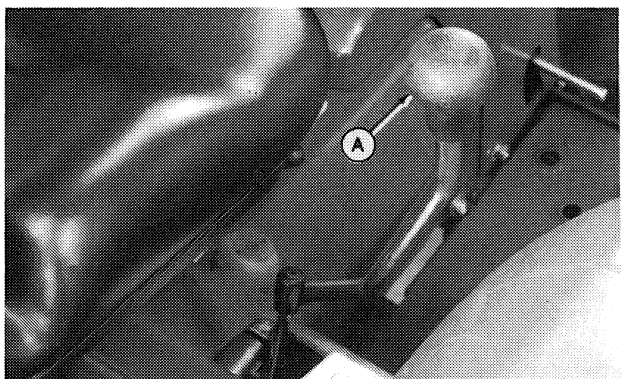
OPERATING LOADER CONTROL LEVER—670 AND 770 TRACTORS

Move lever (A):

- FORWARD TO LOWER BUCKET.
- REARWARD TO RAISE BUCKET.
- RIGHT TO DUMP BUCKET.
- LEFT TO ROLL BACK BUCKET.

The farther you move control lever in any direction, the faster the loader moves.

When you release lever, it will return to neutral and stop loader movement.



MX,CTCN,C -19-16DEC88

M61530 -UN-05JAN89

Preparing the Tractor

PREPARING TRACTOR

1. Install loader mounting kit and SCV kit. Instructions are included with each kit.

60 Loader mounts on:

- 650 Tractor
- 655 Tractor
- 670 Tractor

70 Loader mounts on:

- 750 Tractor
- 755 Tractor
- 770 Tractor
- 855 Tractor

70A Loader mounts on:

- 855 Tractor
- 955 Tractor



CAUTION: To help prevent personal injury, do ALL of following when you prepare loader for operation:

- Put rear wheels in widest position: rims dished out.
- Add fluid to rear tires.
- Put correct number of weights on rear wheels.
- Fill ballast box with dry sand.
- Check tire inflation.

2. Put rear wheels in widest position— rims dished out— to help make tractor more stable. Before you mow with loader attached, you may have to put wheels in narrow position.

3. Add weight to rear of tractor:

- Put fluid in rear tires. See tractor operator's manual.
- Install wheel weights. See chart in this section.
- Fill ballast box with sand. See BALLAST BOX in this section.

4. Inflate tires to correct pressure. See tractor operator's manual.

5. If desired, install inner tubes in front and rear tires to help prevent loss of air and fluid.

6. To help prevent front tire failure caused by heavy loads and punctures, see your John Deere dealer to have urethane foam installed in tires.

MX,PTCN,A -19-12DEC88

REAR BALLAST

IMPORTANT: When you add ballast, do not exceed maximum tire carrying capacity shown on sidewall.



CAUTION: To help prevent personal injury, use correct ballast on your tractor/loader.

Correct ballast should do two things:

- Make tractor/loader more stable during operation.
- Improve traction.

MX,PTCN,B -19-12DEC88

BALLAST BOX

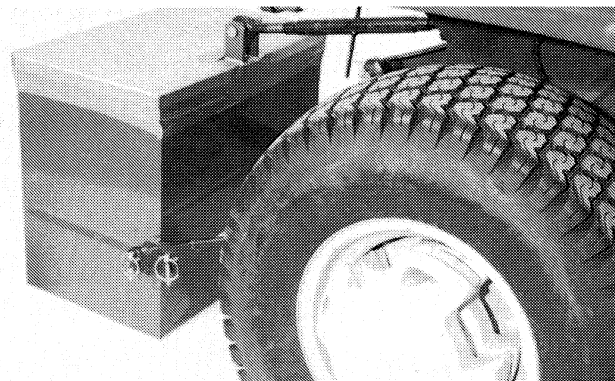
Use dry sand in box.

Volume of box is 0.13 m³ (4.8 cu ft).

280 kg (616 lb) = weight of full box of dry sand

44 kg (96 lb) = weight of box

324 kg (712 lb) = total weight of box and sand



MX,PTCN,C -19-12DEC88

M41895 -JUN-15DEC88

REAR WHEEL WEIGHTS

CAUTION: To help prevent personal injury, follow ALL these steps when you prepare loader for operation:

1. Put rear wheels in widest position: rims dished out.
2. Add fluid to rear tires.
3. Put correct number of weights on rear wheels. See chart below.
4. Install ballast box. Fill it with dry sand.
5. Check tire inflation.

CAUTION: To make tractor/loader more stable, put rear wheels in widest position. If you install mid-mount mower on tractor/loader, mower may interfere with tractor wheels in wide position. Move wheels to a narrower position, if necessary.

Rear weights listed below are based on tractor with fluid-filled rear tires in widest position, and ballast box filled with dry sand.

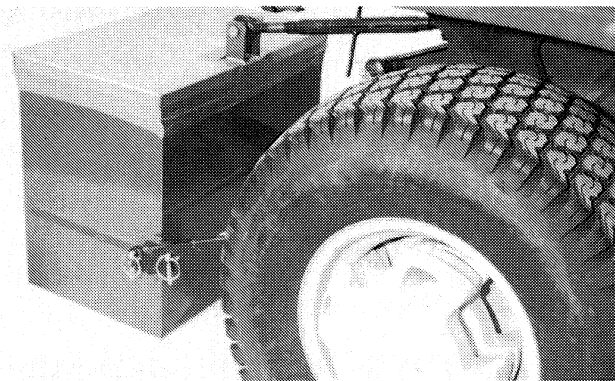
Tractor	Rear Tire Size and Type	Weights Each Side
655	7.2-16—R1	1
	8.3-16—R1	2
	27 x 10.50—Turf	0
	31 x 12.00-15—Turf	0
755	8.3-16—R1	3
	9.5-16—R1	2
	31 x 12.50-15—Turf	0
	33 x 15.50-15—Turf	0
	31 x 15.50-15—Xtra-Trac Turf	0
855	9.5-16—R1	2
	33 x 12.50-15—Turf	1
	11.2-16—R1	1
	36 x 13.50-15—Turf	3
650	9.5-16—R1	3
	31 x 15.50-15—Turf	0
750	9.5-24—R1	2
	13.6-16—Turf	0
670	31 x 15.5-13—Turf	0
	31 x 15.5-13—Xtra-Trac Turf	0
	9.5-16—R1	0
770	13.6-16—Turf	0
	9.5-24—R1	4
	12.4-16—R1	3
955	11.2-16—R1	3
	36x14.5-15—Turf	0

Installation/Removal

INSTALLING LOADER

CAUTION: To help prevent personal injury, install ballast recommended in Preparing the Tractor section.

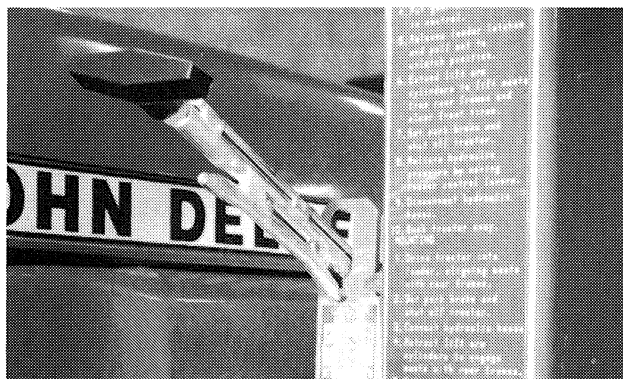
1. Use 3-point hitch ballast box, wheel weights, and fluid in rear tires to provide recommended ballast. See Preparing the Tractor section.



MX,IRC,N,A -19-12DEC88

M41895 -JUN-15DEC88

2. PULL OUT both latch rods to UNLATCH (to remove) position. Right latch rod shown.



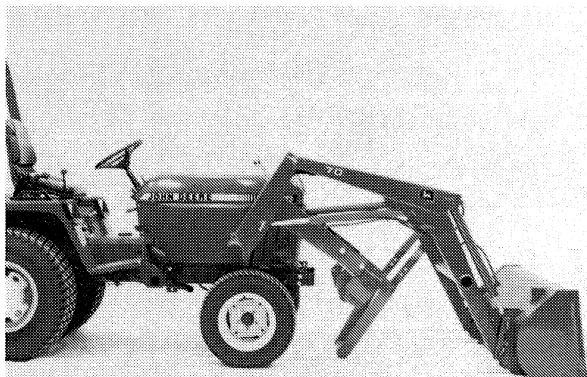
MX,IRC,N,B -19-12DEC88

M41910 -JUN-15DEC88

NOTE: Loader masts must be raised high enough to clear front tires.

3. Drive tractor forward slowly, and centered between masts.

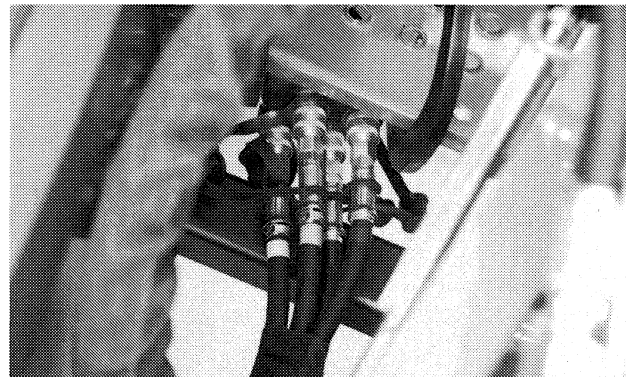
4. Stop tractor when loader hydraulic lines can be connected to tractor.



MX,IRC,N,C -19-12DEC88

M41891 -JUN-15DEC88

CAUTION: To help prevent injury from escaping hydraulic oil under pressure, relieve pressure in hydraulic system: stop engine and operate loader control lever(s) in all four positions.



W13423 -UN-06OCT88

5. Stop engine. Lock park brake.
6. Operate loader control lever(s) in all four positions to relieve hydraulic system pressure.
7. Connect hydraulic couplers. Match silver, yellow, black and green colored bands. See Assembly section.

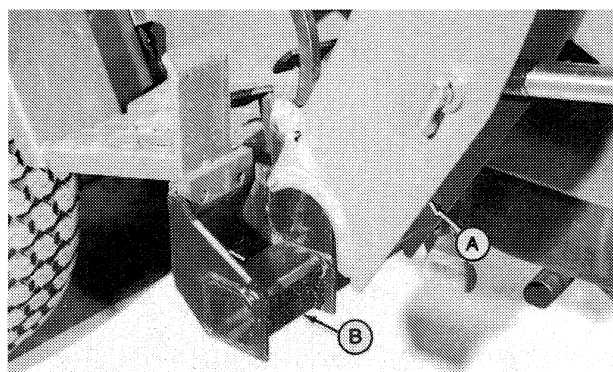
MX,IRCN,D -19-12DEC88

NOTE: You may have to drive forward slowly while you do step 8.

8. Slowly retract lift cylinders: masts (A) will lower into rear mounting frame (B).

NOTE: You may have to reposition tractor for proper frame/mast fit.

9. Continue to retract lift cylinders until front attaching pins lift into front frame slots.

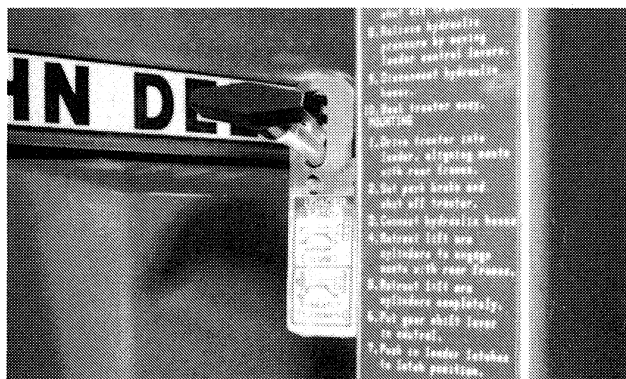


M41892 -UN-26JAN89

MX,IRCN,E -19-12DEC88

10. Continue retracting cylinders until front tractor wheels are off ground.

11. Lift latch rods on each side from UNLATCHED position and PUSH rods FORWARD and DOWN to LATCH (to use) position.



M41894 -UN-15DEC88

MX,IRCN,F -19-12DEC88

ADJUSTING WEDGES

IMPORTANT: Adjust wedges (A) regularly to keep masts tight in mounting frames.

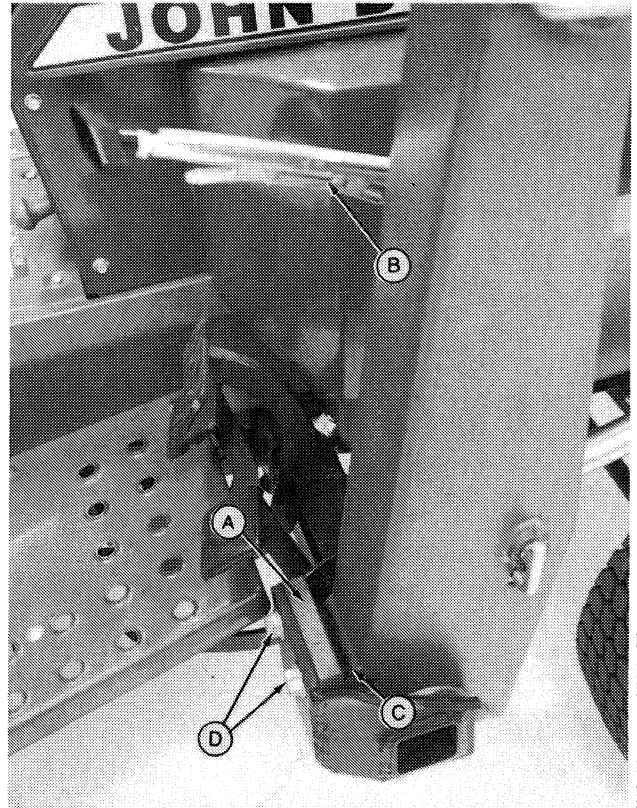
1. Unlock both left and right latch rods (B) and pull them out to UNLATCH (to remove) position.
2. Drop front pin out of hanger bracket about 25 mm (1 in.) to tip mast forward slightly.
3. Loosen bolts (D) and tap wedge down until it contacts ramp (C) AT ALL POINTS of ramp surface.

NOTES: If wedge bolts hit bottom of adjustment slot, grind out bottom of slot.

4. Repeat on opposite side. Tighten bolts to 125 N·m (92 lb-ft).

5. Retract cylinders until front wheels of tractor are off ground. Push in latch rods to LATCH (to use) position.

NOTE: If latches are hard to latch or cannot be latched, wedges may be down too far. Follow steps above to adjust wedges to higher position.



W13459 -JN-06OCT88

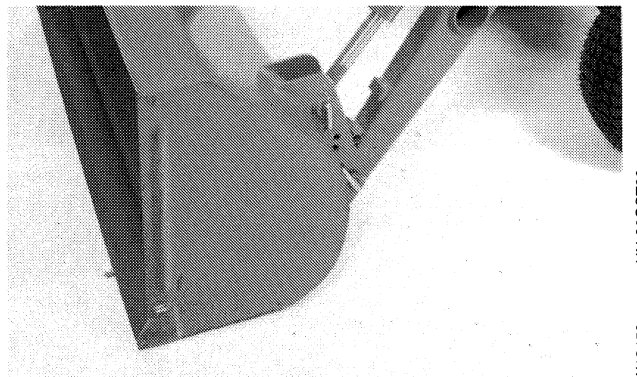
MX,IRC,N,G -19-12DEC88

REMOVING LOADER

CAUTION: To help prevent personal injury caused by falling loader, remove loader on hard, level surface.

1. Level bucket and lower it to ground.

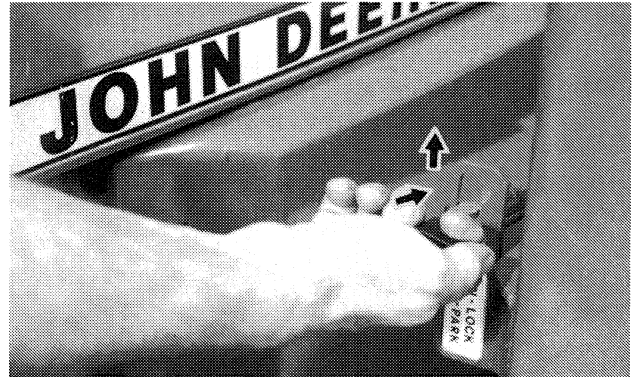
NOTE: Latching and unlatching front of loader is easier with front tractor wheels slightly raised off ground.



W13450 -JN-06OCT88

MX,IRC,N,H -19-12DEC88

2. Push in latch rod handle and lift it to top of slot.

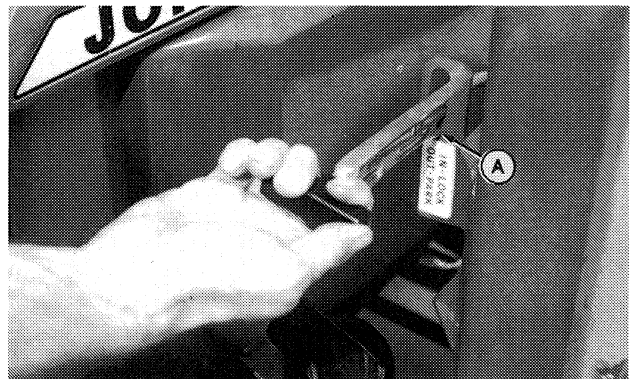


MX,IRCNI -19-12DEC88

W13451 -UN-06OCT88

3. Pull out latch rod to release latch. Lower rod, push it forward, and engage pin in latch hole (A).

4. Repeat on other side.



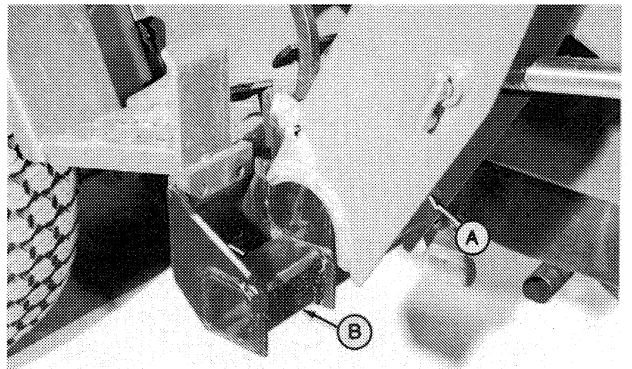
MX,IRCNIJ -19-12DEC88

W13452 -UN-06OCT88

5. Extend lift cylinders: parking stand will lower to ground and lift masts (A) out of mounting frames (B).

NOTE: Masts must be raised enough to clear front tires, to allow you to back tractor away from loader.

6. Drive tractor slowly in reverse. Keep tractor centered between masts.

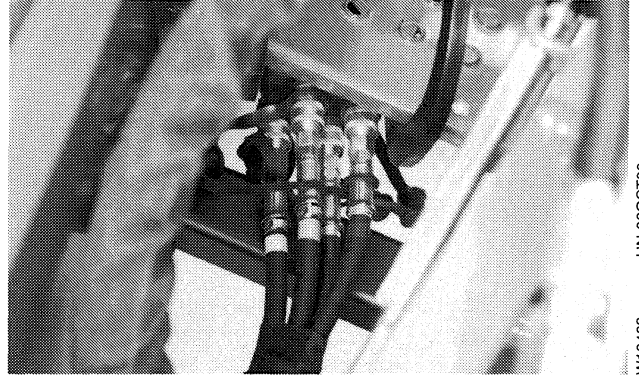


MX,IRCNIK -19-12DEC88

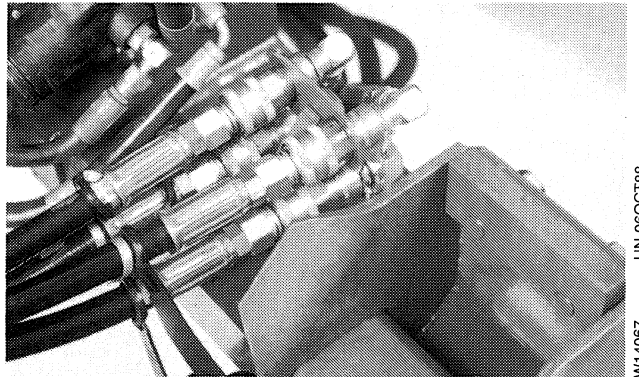
M41892 -UN-26JAN89

⚠ CAUTION: To help prevent injury from escaping hydraulic oil under pressure, relieve pressure in hydraulic system: stop engine and operate control lever(s) in all four positions.

7. Stop engine. Lock park brake.
8. Operate loader control lever(s) in all four positions to relieve hydraulic system pressure.
9. Disconnect couplers.



55 Series Tractor



50 Series Tractor

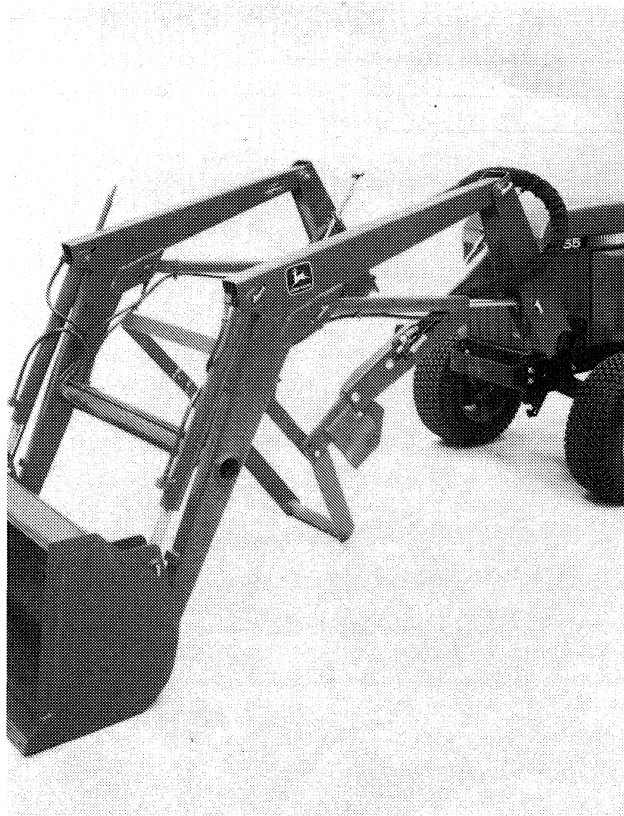
MX,IRC,N,L -19-12DEC88

10. Put loader hoses over lift arm, not on ground. Put caps on hoses and dust plugs in couplers.

11. Slowly back tractor away from loader.

NOTE: Before you store loader for a long time: lubricate all lubrication points and coat exposed cylinder rod surfaces with grease. See Storage section.

CAUTION: After you remove loader, you must also remove ballast box to help maintain steering control.



MX,IRC,N,M -19-12DEC88

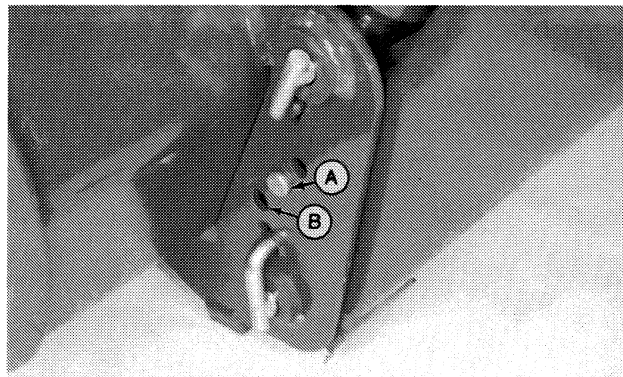
W13443 -UN-06OCT88

Operating the Loader

REMOVING BUCKET LOCK PINS—LOADER ON 55 SERIES TRACTOR

NOTE: Use bucket lock pins only when optional midrockshaft hydraulic cylinder and mid-mower are installed on tractor at same time. Lock pins must be installed to lock out bucket movement when you raise or lower mower.

1. Put bucket in rollback position.
2. Remove bucket lock pins (A).
3. Put pins in storage holes (B).



TY14090 -JUN-23AUG88

MX,OLCN,A -19-18DEC88

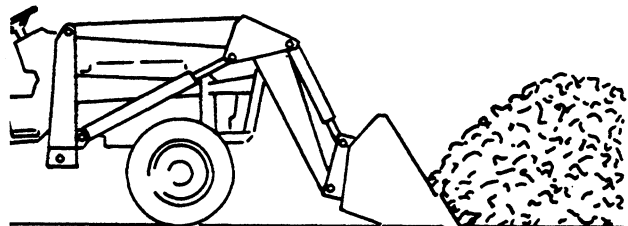
REMOVING MATERIAL FROM PILE



CAUTION: Do not use loader for handling round bales or as a battering ram.

1. Enter pile with bucket level.

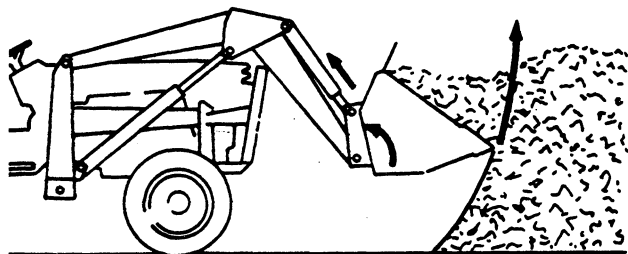
NOTE: To level bucket and reduce wear, use bracket on upper right side of bucket to gauge level bucket. See **CLEANING CONCRETE SURFACES** in this section. Optional bucket level indicator is available. See **Optional Equipment** section.



TY10728 -JUN-23AUG88

MX,OLCN,B -19-18DEC88

2. Raise lift arms and roll-back bucket at same time. See Controls section for use of controls.



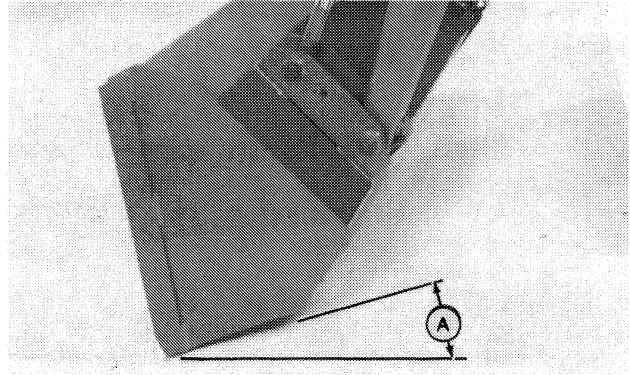
TY10729 -JUN-23AUG88

MX,OLCN,C -19-18DEC88

FORWARD LEVELING

IMPORTANT: To help prevent excessive wear and damage to cutting edge:

- Keep bucket level to distribute weight on wear pads.
- Do not raise bucket more than 15° (A).
- Use FLOAT to reduce down pressure on bucket.
- Drive forward slowly.



W14797 -JN-19JAN89

MX,OLCN,D -19-18DEC88

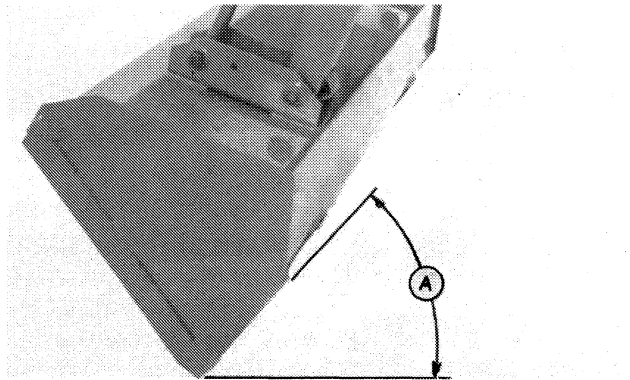
REVERSE LEVELING

IMPORTANT: Reverse leveling with bucket at more than 45° (A), may damage cutting edge and/or loader linkage.

Raise bucket between 30 and 45° (A).

Drive slowly in reverse.

When possible, use FLOAT to reduce down pressure on bucket.



W14798 -JN-19JAN89

MX,OLCN,E -19-18DEC88

LOADING OPERATIONS

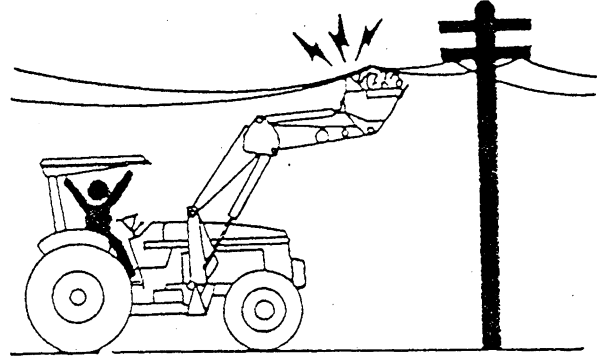
- ⚠ CAUTION:** To help prevent serious injury or death from loader contact with power lines:
- Be aware of clearance between lift arms/bucket and power lines when you raise lift arms.
 - Do not dismount from tractor if any part of tractor or loader is in contact with power line.

1. Carry load low:
 - To help prevent spilling material from bucket.
 - To help make tractor/loader more stable.
 - To help prevent bucket from blocking your forward view.

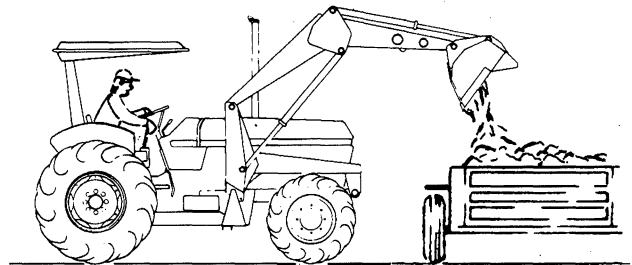
2. Roll-back bucket as you raise it to desired height.

- ⚠ CAUTION:** Do not use FLOAT to lower and dump bucket: You will lose control of loader as bucket falls freely.

3. Lower load slowly to help prevent possible loader, tractor, or vehicle damage.



M61942 -JUN-05/JAN89



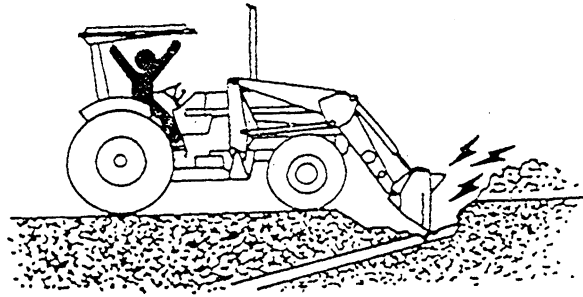
W14209 -JUN-05/OCT88

MX,OLCN,F -19-18DEC88

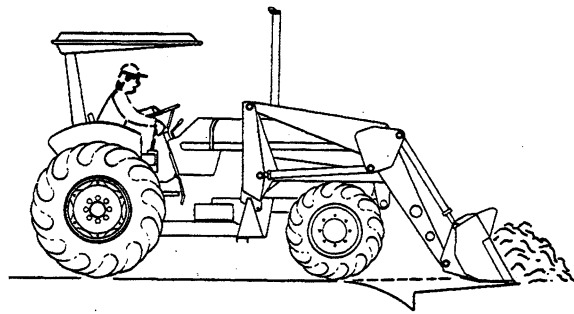
DIGGING OR PEELING

CAUTION: To help prevent serious injury or death from underground lines or cables breaking, check locations before you dig. Do not dismount from tractor if any part of tractor or loader is in contact with power line.

1. Before you dig, check location of underground lines and cables.
2. Angle bucket down slightly, and drive forward slowly.
3. When bucket has penetrated several inches, level bucket and drive forward until bucket is full.



M61941 -UN-05JAN89



W14212 -UN-05OCT88

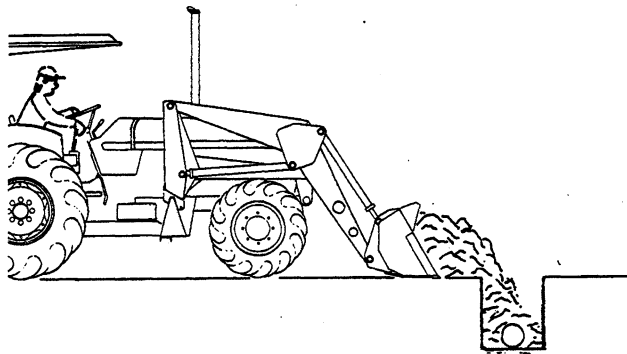
MX,OLCN,G -19-18DEC88

BACKFILLING

When you backfill from large pile, shovel to top of pile and push soil towards excavation. Drag some soil back to form work ramp of low grade.

Approach pile with bucket level.

Adjust cut to a load tractor can push. Keep bucket level.



W14213 -UN-05OCT88

MX,OLCN,H -19-18DEC88

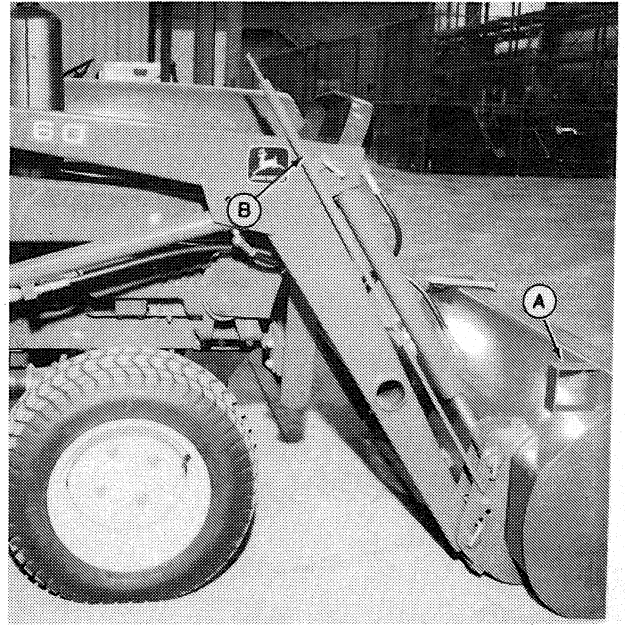
CLEANING CONCRETE SURFACES

IMPORTANT: Cleaning concrete surfaces may cause rapid bucket wear.

- Keep bucket level to distribute weight on wear pads.
- Use FLOAT to reduce down pressure on bucket.
- Drive slowly.

To tell when bucket is level:

- Use bracket (A): When top of bracket is level, bottom of bucket should be parallel to ground.
- Use optional bucket level indicator (B): Guide is angled so you can see rod emerging before bucket is level.



M41911 -UN-15DEC88

MX,OLCN,I -19-12DEC88

Optional Equipment

BUCKET LEVEL INDICATOR

Bucket Level Indicator (A) allows operator to see if bucket is level when bucket is on ground.

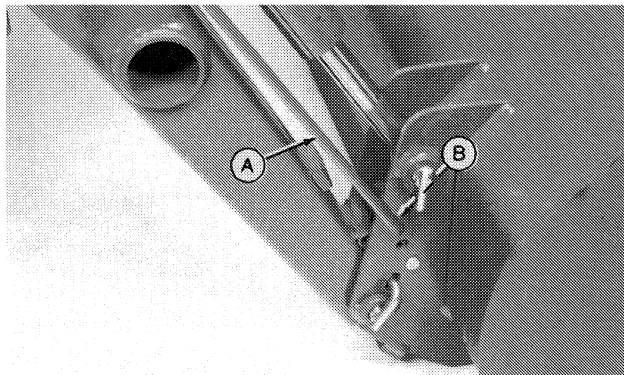


MX,OECA -19-12DEC88

W13444 -UN-06OCT88

INSTALLING BUCKET LEVEL INDICATOR

1. Fasten rod (A) to upper hole in bucket bracket with spring pin (B).



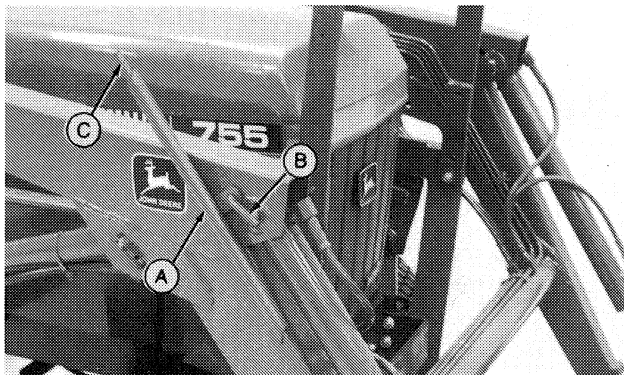
MX,OECA,B -19-12DEC88

W13446 -UN-06OCT88

2. Route rod guide (A) over rod. Fasten guide to loader with bucket cylinder pin (B).

3. Level bucket with ground. Paint exposed rod (C) a bright color, such as yellow, or cut it off flush with guide.

NOTE: Guide is angled so you can see rod emerging before bucket is level.



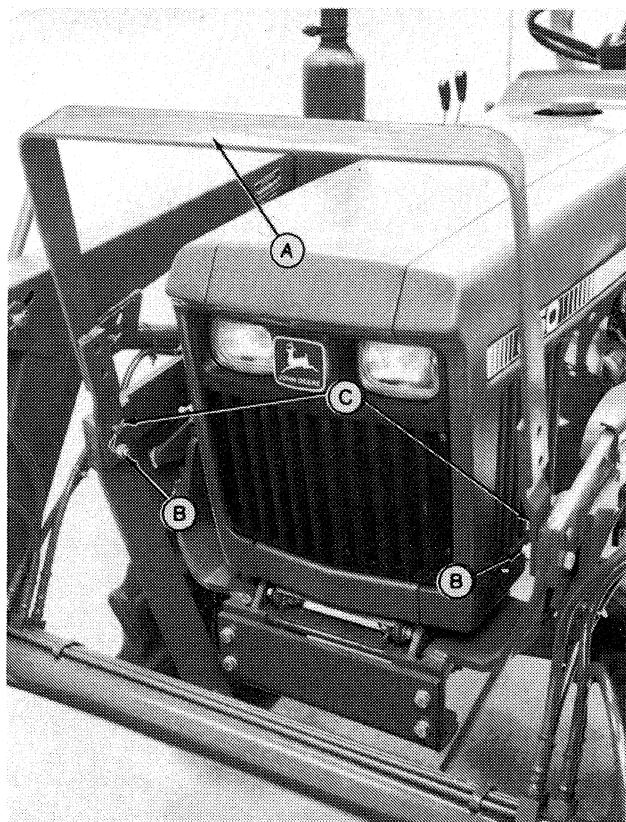
MX,OECA,C -19-12DEC88

W13447 -UN-06OCT88

HOOD GUARD

Hood guard (A) helps protect front of tractor from damage.

1. Attach hood guard to each side of parking stand with 1/2 x 2-in. fine-thread cap screws and lock nuts (B).
2. Tighten hardware until you feel slight restriction when you raise or lower hood guard.
3. Fasten guard in top holes with drilled pins and spring locking pins (C).

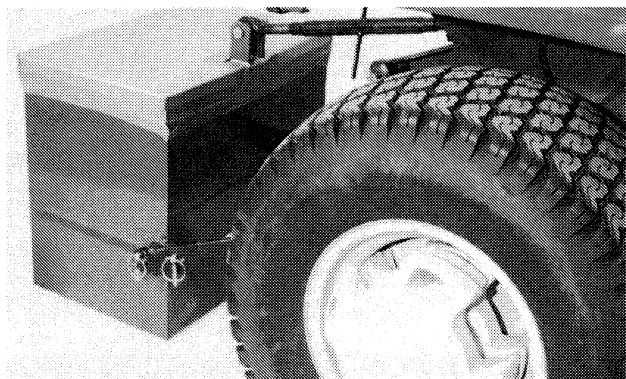


MX,OECD,D -19-12DEC88

W13455 -UN-06OCT88

BALLAST BOX

Box carries dry-sand ballast on 3-point hitch:
—To help make tractor/loader more stable.
—To help improve traction.



MX,OECD,E -19-12DEC88

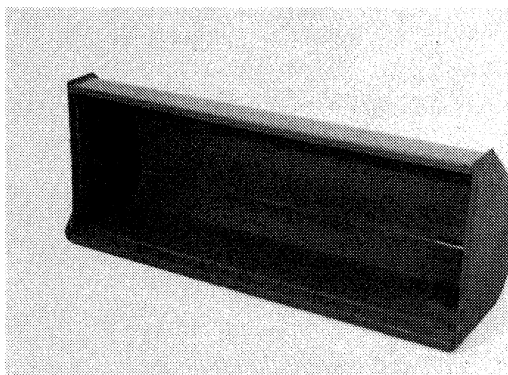
M41895 -UN-15DEC88

MATERIALS BUCKETS

Three buckets are available for handling general materials.

Bucket widths and struck capacity:

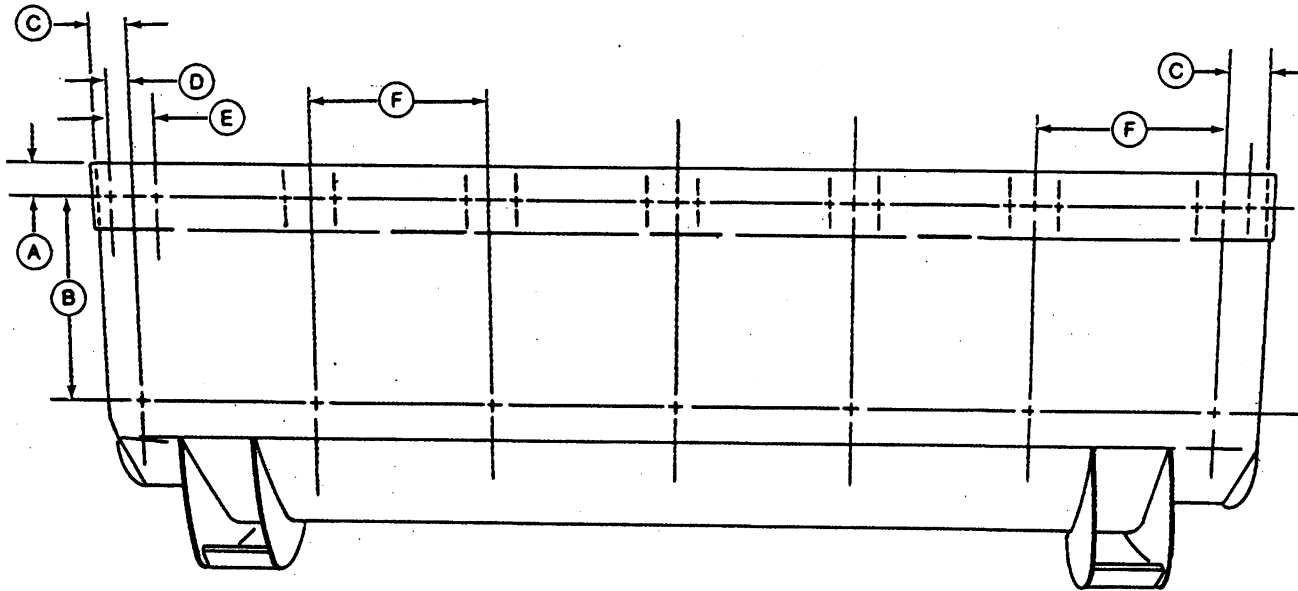
- 1220 mm (48 in.).....0.175 m³ (6.2 cu ft)
- 1370 mm (54 in.).....0.198 m³ (7.0 cu ft)
- 1520 mm (60 in.).....0.221 m³ (7.8 cu ft)



MX,OECD,F -19-12DEC88

W13435 -UN-06OCT88

CONVERTING MATERIALS BUCKET TO MANURE BUCKET



W13496 -JUN-06OCT88

1. Use following dimensions to convert 1220-mm (48-in.) or 1370-mm (54-in.) materials buckets to manure bucket by adding tines (available from your John Deere dealer).

1220-mm (48-in.) Bucket

A—38 mm (1.5 in.)
B—190 mm (7.5 in.)

C—35 mm (1.4 in.)
D—25 mm (1 in.)

E—50 mm (2 in.)
F—190 mm (7.5 in.)

1370-mm (54-in.) Bucket

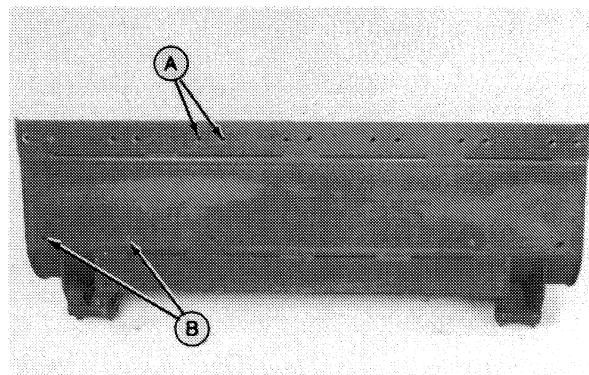
A—38 mm (1.5 in.)
B—190 mm (7.5 in.)

C—35 mm (1.4 in.)
D—25 mm (1 in.)

E—50 mm (2 in.)
F—215 mm (8.5 in.)

MX,OECH,G -19-12DEC88

2. Drill fourteen 11-mm (0.43-in.) holes (A).
3. Drill seven 13-mm (0.5-in.) holes (B).



W13442 -JUN-06OCT88

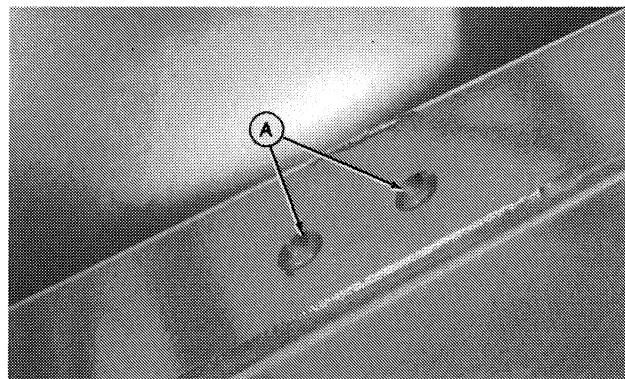
MX,OECH,H -19-12DEC88

Optional Equipment

4. Countersink fourteen holes (A) 2 mm (0.08 in.) with 19-mm (0.75-in.) drill bit.

NOTE: Countersinking holes allows nuts to be threaded fully onto U-bolts and helps reduce hardware wear.

5. Fasten tines to bucket with M12 x 40 cap screws (heads down), flat washers, and nuts.
6. Fasten tines at front of bucket with U-bolts and nuts.



MX,OECH,I -19-12DEC88

W13437 -JUN-06OCT88

Troubleshooting

PROBLEMS AND SOLUTIONS

IF ONLY ONE MAST ENGAGES MOUNTING FRAME:

—Park loader on level ground.

IF LOADER IS LOOSE IN MOUNTING FRAME:

—Adjust wedges.

IF YOU CANNOT CONNECT A HYDRAULIC COUPLER:

—Move control lever(s) to all four positions to relieve hydraulic pressure.

IF YOU CANNOT ENGAGE LATCHES ON LOCK RODS:

—Front pins may not be at top of slot. Check for interference.

—Wedges may be too far down. Adjust wedges higher.

IF YOU CANNOT DISENGAGE LATCHES ON LOCK RODS:

—Front pins may be stuck in mounting bracket. Raise front of tractor off ground with down pressure on bucket.

—Use correct viscosity hydraulic oil.

—Check hydraulic oil level.

—Change hydraulic filter.

IF LOADER WILL NOT LIFT A LOAD:

—Check specifications. Load may be too heavy.

IF LOADER FUNCTIONS DO NOT CORRESPOND TO CONTROL LEVER MOVEMENT:

—Connect hoses correctly.

IF A CYLINDER WILL NOT OPERATE:

—Connect hoses correctly.

IF OIL LEAKS:

—Tighten fittings.

—Replace faulty fittings or hoses.

MX,TSCN,A -19-12DEC88

Lubrication

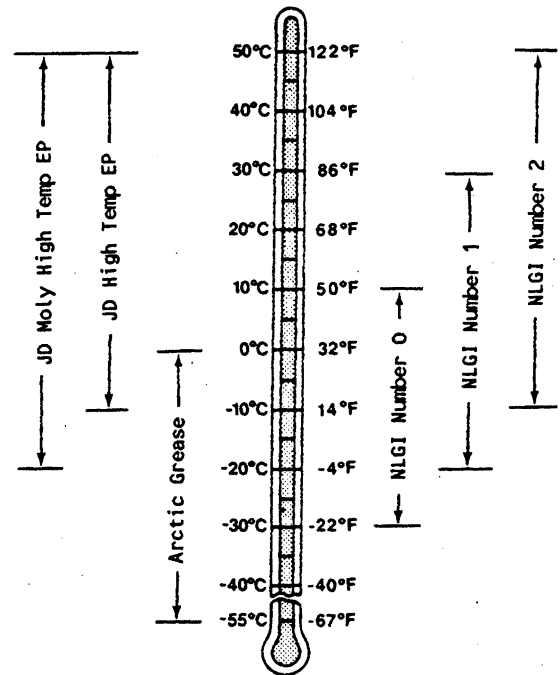
EXTREME PRESSURE GREASE

Use grease based on expected air temperature range during service interval.

John Deere Moly High Temperature EP Grease (TY6333) and John Deere High Temperature EP Grease are recommended.

Other greases that may be used are:

- SAE Multipurpose EP Grease with 3 to 5 percent molybdenum disulfide.
- SAE Multipurpose EP Grease.
- Greases meeting Military Specification MIL-G-10924C may be used as arctic grease.



O53,GREA1

-19-08FEB88

TS248 -19-07OCT88

LUBRICATING BOOM, BUCKET, AND LIFT CYLINDERS—10 HOURS

Lubricate 12 points.



W13432 -UN-06OCT88

MX,LUCN,A

-19-12DEC88

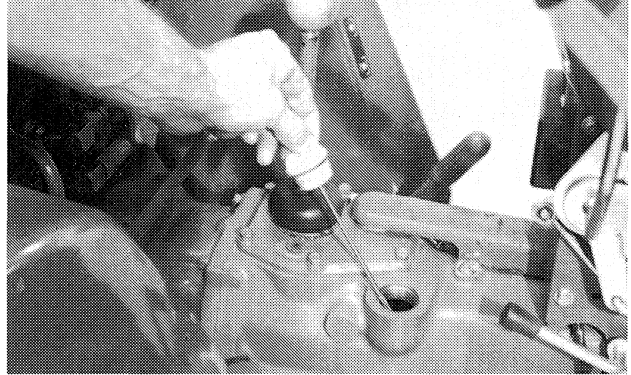
CHECKING TRANSMISSION/HYDRAULIC OIL LEVEL—50 HOURS

Cycle loader cylinder three or four times.

Lower loader to ground.

Check transmission/hydraulic oil level. See your tractor operator's manual.

For cold weather operation use oil meeting JDMJ20B standards.



W13448 -UN-06OCT88

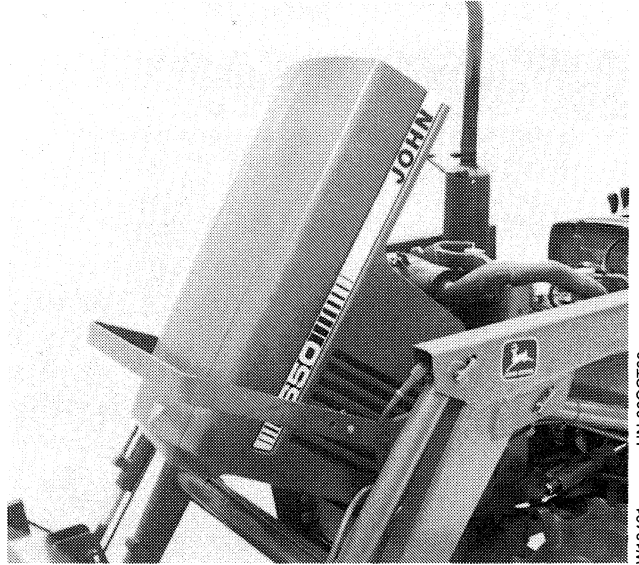
MX,LUCN,B -19-12DEC88

Service

SERVICING TRACTOR/LOADER WITH HOOD GUARD—650 AND 750 TRACTORS

To service tractor, pivot hood guard forward before you raise hood:

1. Remove spring locking pin (A) and drilled pin.
2. Pull hood guard forward.
3. After service, return hood guard to original position.



W13461 -UN-06OCT88

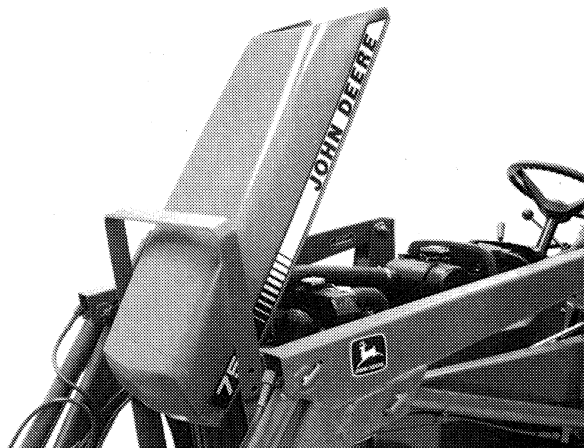


W13460 -UN-06OCT88

MX,SECN,A -19-12DEC88

SERVICING TRACTOR/LOADER WITH HOOD GUARD—655, 670, 755, 770, 855, AND 955 TRACTORS

You may raise hood with hood guard in position.



W13428 -UN-06OCT88

MX,SECN,B -19-12DEC88

TIGHTENING LOADER HARDWARE—50 HOURS

Tighten hardware after first 10 hours of loader operation, and every 50 hours after that.

Check wedge adjustment regularly. See ADJUSTING WEDGE in Installation/Removal section.

MX,SECN,C -19-12JAN89

Storage

STORING LOADER

1. Put dust covers on hose ends.

2. Clean loader.

3. Remove rust.

4. Paint loader where needed.

5. Replace missing or damaged parts.

6. Lubricate grease points.

7. Coat exposed cylinder rods with grease to help prevent rust.

8. For long storage close cylinders to protect rods:

—Park tractor along side loader.

—Connect loader hoses to tractor.

—Slowly retract all cylinders.

NOTE: Extend cylinders before you attach loader to tractor.

9. If possible, store loader in a dry place.

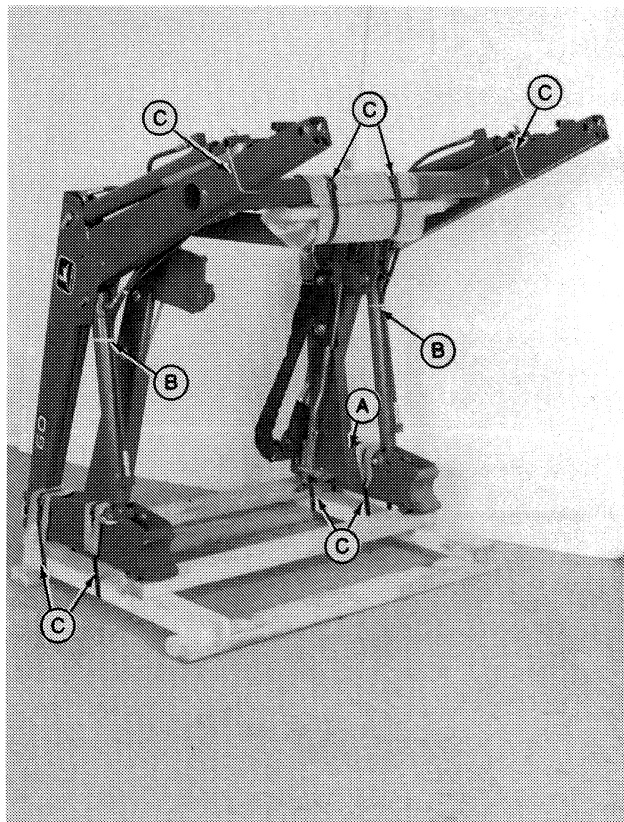
10. Store hoses on loader. Do not lay them on ground.

MX,STCN,A -19-09JAN89

Assembly

INSTALL WIRE-FORM HOSE RETAINER

1. Install hose retainer (A) with 5/16 self-tapping bolt.
2. DO NOT route hoses through hose retainer at this time.
3. DO NOT cut bands (B) on left and right hydraulic cylinders.
4. Cut all bands (C).
5. Remove all dunnage.



MX,ASCN,A -19-14DEC88

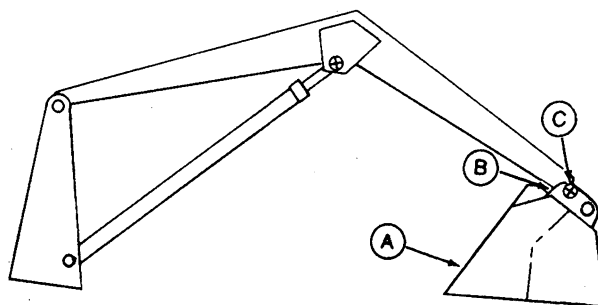
M61015 -UN-15DEC88

INSTALL BUCKET

1. Put bucket (A) face down under lift arms on hard, level surface.
2. Slowly tip (by hand) loader lift arms into bucket bracket (B).

IMPORTANT: Do not damage grease fittings.

3. Install lower bucket arm pins with two pins (C) and two cotter pins.



MX,ASCN,B -19-14DEC88

M41898 -UN-15DEC88

NOTE: Tractor and loader must be close enough to connect loader hydraulic hose to tractor couplers.

4. Put left side of tractor close to left side of loader.
5. Stop engine. Lock park brake.
6. Install colored bands on loader hoses.

MX,ASCN,C -19-14DEC88

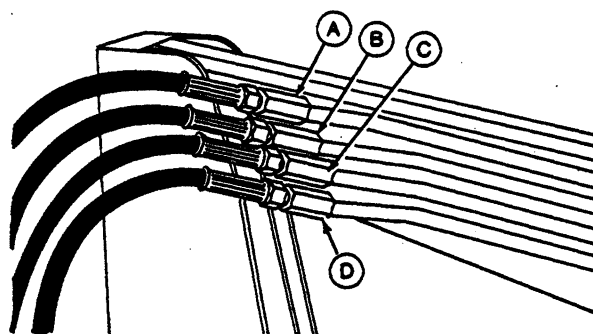
NOTE: If desired, you may check hose connections with following information:

Colored Band

- A—Silver
- B—Yellow
- C—Black
- D—Green

Cylinder/Position

- Bucket Cylinder/Base End
- Bucket Cylinder/Rod End
- Lift Cylinder/Rod End
- Lift Cylinder/Base End



MX,ASCN,D -19-14DEC88

W13471 -UN-06OCT88

7. Operate loader control lever(s) in all four positions to relieve hydraulic system pressure.

8. Connect loader colored-band hoses to matching colored-band tractor couplers.

9. Start engine. Use control lever to extend two bucket cylinders so you can connect cylinder rod ends to two top pivot holes in bucket. Install lock pins and cotter pins.

10. Retract bucket cylinders to level bucket.

11. Keep bucket on floor as you slowly extend lift arm cylinders to raise rear of loader to maximum height on storage stand. Do not stretch hydraulic hoses connected to tractor.

12. Stop engine. Rear of loader should be high enough to clear front tires.

NOTE: When you relieve hydraulic system pressure, loader lift cylinders may retract slightly and allow loader to settle.

13. Operate loader control lever(s) in all four positions to relieve hydraulic system pressure.

14. Disconnect loader hydraulic hoses from tractor couplers.

15. Route hoses through hose retainer.

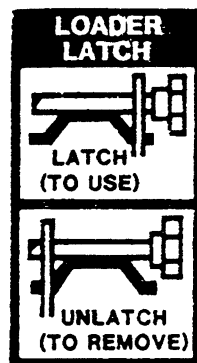
16. Put hoses over loader mast.

17. Drive tractor away from loader.

MX,ASCN,E -19-14DEC88

INSTALL AND ADJUST LOADER TO TRACTOR

1. Pull out loader latch rods to UNLATCH (to remove) position.
2. Drive tractor slowly forward between loader masts far enough to connect hoses.
3. Stop engine. Lock park brake.
4. Loosen wedges. Move wedges as high as they will go. Tighten wedges temporarily.



M41899 -19-14MAR89

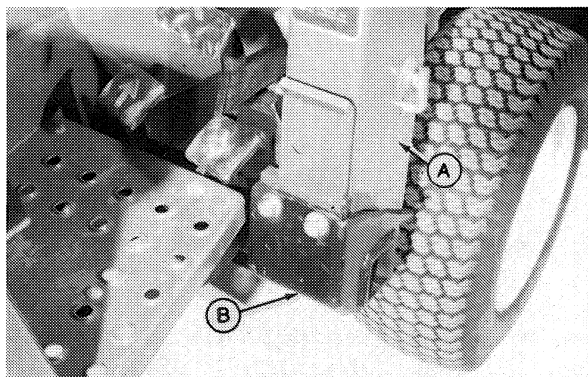
MX,ASCN,F -19-14DEC88

5. Operate loader control lever(s) in all four positions to relieve hydraulic system pressure.

6. Connect loader colored-band hose to matching colored-band tractor couplers.

NOTE: You may have to drive tractor slowly forward while you do following:

7. Slowly retract lift cylinder: masts (A) will lower into rear mounting frames (B).



M41893 -UN-12JAN89

MX,ASCN,G -19-14DEC88

8. Slowly retract lift cylinders until front mounting pins are up to—but not in—front hanger bracket.

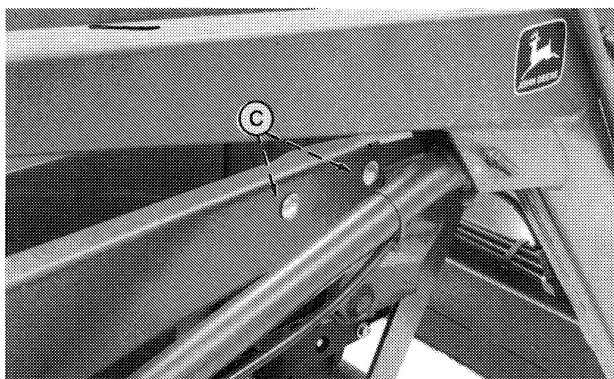
9. Stop engine. Lock park brake.

10. Loosen nuts on four carriage bolts (2 each side) (C) 1/2 turn.

11. Start engine.

12. Slowly retract lift cylinder until front mounting pins are fully in top of slot of front hanger bracket.

NOTE: Front tractor wheels must be off ground.



W13410 -UN-25JAN89

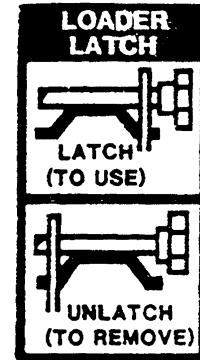
MX,ASCN,H -19-14DEC88

13. Push latch rods forward and down to LATCH (to use) position.

14. Stop engine.

15. Tighten four carriage bolts to 210 N·m (155 lb-ft).

NOTE: Latching and unlatching the latch mechanism at front of loader is easier with front tractor wheels slightly raised off ground.



MX,ASCN,I -19-14DEC88

M41899 -19-14MAR89

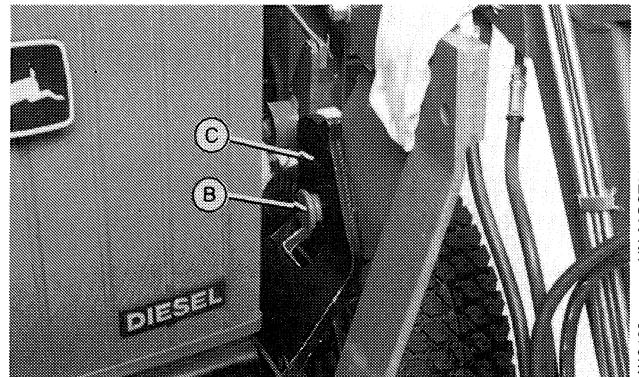
16. Start engine.

17. Pull rods out to UNLATCH (to remove) position.

18. Drop front pins (B) down in front bracket (C) about 25 mm (1 in.) (A).

19. Stop engine.

20. See ADJUSTING WEDGE in Installation/Removal section. Loosen both wedges. Tap wedges down. Tighten bolts to 125 N·m (92 lb-ft).



W13420 -UN-06OCT88

21. Start engine.

22. Retract lift cylinders until front mounting pins are fully in top of slot of front bracket.

23. Push latch rods forward and down to LATCH (to use) position.

MX,ASCN,J -19-14DEC88

24. Stop engine.

25. Lubricate loader 12 lubrication points.

26. Cycle all loader hydraulic functions five (5) times to bleed air from hydraulic system.

27. Check cycle times. See chart in Specifications section for cycle times.

28. Check transmission oil level. See Lubrication and Maintenance section.

MX,ASCN,K -19-14DEC88

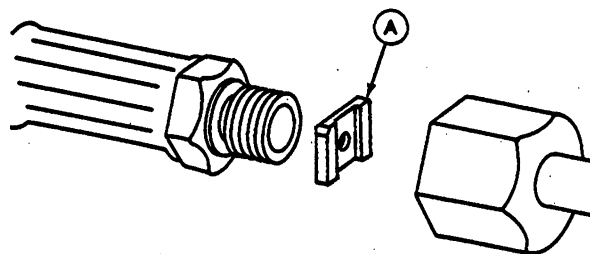
INSTALL RESTRICTER—60 LOADER ON 670 TRACTOR ONLY

CAUTION: To help prevent bodily injury, correct restrictor must be in place to help control loader rate of drop.

NOTE: Restricters (B) installed at factory are in GREEN and YELLOW colored- band hydraulic hoses, between hose (A) and steel tube (C).

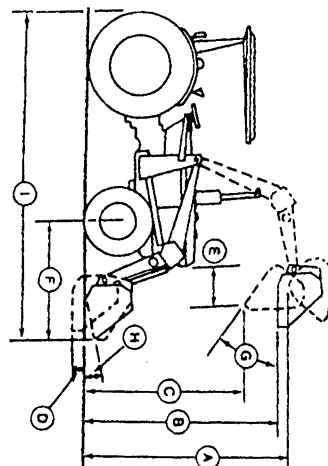
1. On 60 Loader for 670 Tractor, remove factory restrictor (with 2.3-mm [0.090-in.] orifice) from GREEN colored-band hose.

2. Install new restrictor (with 1.5-mm [0.060-in.] orifice) from bag of parts.



W13466 -JUN-06OCT88

MX,ASCN,L -19-14DEC88

**Capacity:**

Lift capacity at full height

- At: (1) 450 mm (18 in.)
(2) 900 mm (36 in.)
(3) 1800 mm (72 in.)

Breakout (boom)
Breakout (bucket)

Dimensions:

Maximum lift height (A)

Clearance:

With bucket level (B)

With bucket dumped (C)

Digging depth (D)

Reach:

At max. height & dumped (E)

At ground level & level (F)

Max. dump angle (G)

Rollback angle on ground (H)

Overall length (I)

Cycle times:

Loader raising time

Loader lowering time

Bucket dumping time

Bucket rollback time

Hydraulic flow

Bucket size

Based on tractor tires size:

Front

Rear

*With regeneration circuit

Notes: 1). Dimensional specs based on static loaded radius, front and rear.
2). All loader specs are theoretical calculated specs.
3). 90 percent hydraulic efficiency is used to calculate lift capacity and boom breakout.
4). Variation in lift capacity and other specs for different tractors are due to geometry change from different tires.
5). Cycle times are based on flow rates at S.C.V. and with power steering.

(Specifications and design subject to change without notice)

60 Loader 655 Tractor	60 Loader 650 Tractor	70 Loader 755 Tractor	70, 70A Loaders 855 Tractor	70 Loader 750 Tractor	60 Loader 670 Tractor	70 Loader 770 Tractor	70A Loader 955 Tractor
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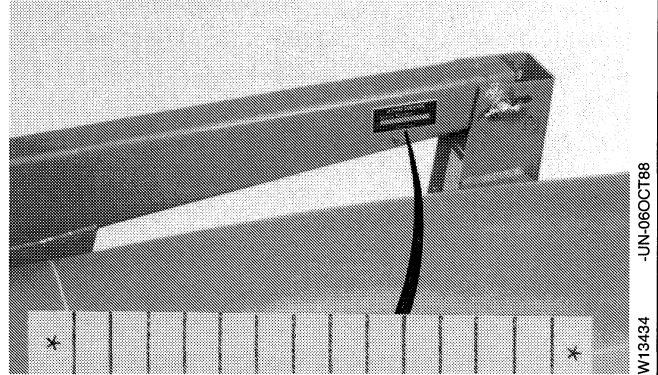
273 kg (600 lb) 385 kg (845 lb) 335 kg (735 lb)	273 kg (600 lb) 385 kg (845 lb) 335 kg (735 lb)	318 kg (700 lb) 540 kg (1190 lb) 460 kg (1010 lb) 335 kg (735 lb)	318 kg (700 lb) 540 kg (1190 lb) 460 kg (1010 lb) 335 kg (735 lb)	318 kg (700 lb) 540 kg (1190 lb) 460 kg (1010 lb) 335 kg (735 lb)	272 kg (600 lb) 385 kg (845 lb) 335 kg (735 lb)	318 kg (700 lb) 540 kg (1190 lb) 460 kg (1010 lb) 335 kg (735 lb)	390 kg (854 lb) 660 kg (1452 lb) 560 kg (1232 lb) 410 kg (897 lb)
4010 N (900 lb) 6660 N (1495 lb)	4010 N (900 lb) 6660 N (1495 lb)	5790 N (1300 lb) 6995 N (1570 lb)	5790 N (1300 lb) 6995 N (1570 lb)	5790 N (1300 lb) 6995 N (1570 lb)	4010 N (900 lb) 6660 N (1495 lb)	4010 N (900 lb) 6660 N (1495 lb)	7054 N (1586 lb) 8520 N (1915 lb)
1765 mm (69.5 in.)	1765 mm (69.5 in.)	1965 mm (77.3 in.)	1965 mm (77.3 in.)	1965 mm (77.3 in.)	1765 mm (69.5 in.)	1965 mm (77.3 in.)	1965 mm (77.3 in.)
1670 mm (65.8 in.) 1370 mm (54 in.) 125 mm (5 in.)	1670 mm (65.8 in.) 1370 mm (54 in.) 125 mm (5 in.)	1875 mm (73.8 in.) 1575 mm (62 in.) 125 mm (5 in.)	1875 mm (73.8 in.) 1575 mm (62 in.) 125 mm (5 in.)	1875 mm (73.8 in.) 1575 mm (62 in.) 125 mm (5 in.)	1670 mm (65.8 in.) 1370 mm (54 in.) 125 mm (5 in.)	1875 mm (73.8 in.) 1575 mm (62 in.) 125 mm (5 in.)	1875 mm (73.8 in.) 1575 mm (62 in.) 125 mm (5 in.)
655 mm (25.8 in.) 1265 mm (49.8 in.) 45° 22°	655 mm (25.8 in.) 1265 mm (49.8 in.) 45° 22°	700 mm (27.5 in.) 1215 mm (47.8 in.) 45° 22°	700 mm (27.5 in.) 1215 mm (47.8 in.) 45° 22°	685 mm (27 in.) 1265 mm (49.8 in.) 45° 22°	700 mm (27.5 in.) 1265 mm (49.8 in.) 45° 22°	762 mm (30 in.) 1219 mm (48 in.) 45° 22°	787 mm (31 in.) 1219 mm (48 in.) 45° 22°
2980 mm (117.2 in.)	3100 mm (122.1 in.)	3080 mm (121.2 in.)	3255 mm (128.2 in.)	3340 mm (131.5 in.)	3080 mm (121.2 in.)	3187 mm (125.5 in.)	3225 mm (127 in.)
4.3 seconds 2.7 seconds 3.7 seconds*	2.1 seconds 1.3 seconds 4.3 seconds	3.2 seconds 2.0 seconds 2.2 seconds*	3.2 seconds 2.0 seconds 2.2 seconds*	2.1 seconds 1.3 seconds 3.6 seconds	2.2 seconds 2.0 seconds 2.1 seconds	2.7 seconds 2.6 seconds 2.0 seconds	2.8 seconds 2.0 seconds 2.5 seconds
3.6 seconds 9.6 L/m (2.6 gpm)	1.7 seconds 20.1 L/m (5.3 gpm)	2.2 seconds 15.7 L/m (4.1 gpm)	2.2 seconds 15.7 L/m (4.1 gpm)	2.2 seconds 23.8 L/m (6.3 gpm)	2.0 seconds 21.5 L/m (5.6 gpm)	2.0 seconds 21.5 L/m (5.7 gpm)	2.1 seconds 27.2 L/m (7.2 gpm)
1220 mm (48 in.)	1220 mm (48 in.)	1220 mm (48 in.)	1220 mm (48 in.)	1220 mm (48 in.)	1372 mm (54 in.)	1372 mm (54 in.)	1524 mm (60 in.)
6-12 9.5-16	6-12 9.5-16	6-12 9.5-16	6-12 9.5-16	6-14 9.5-24	6-12 9.5-16	6-12 9.5-16	25 x 8.5-14 36 x 13.5-15

RECORD LOADER IDENTIFICATION NUMBER

NOTE: Loader model number and identification number are listed on plate shown.

Record loader identification number below. Your dealer needs this number when you order parts.

Identification Number

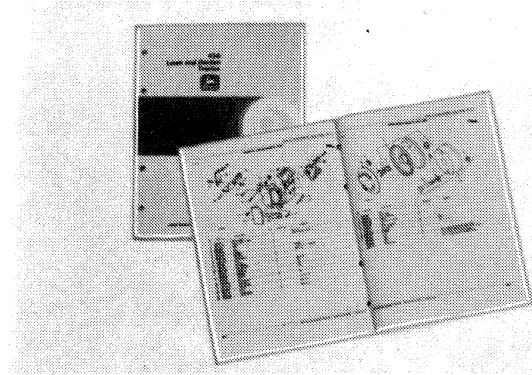


MX,SPCN,B -19-14DEC88

John Deere Service Literature

PARTS CATALOG

The parts catalog lists service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.



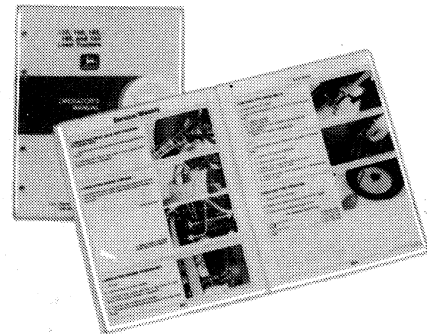
O53,PARTS -19-27NOV85

TS189 -UN-17JAN89

OPERATOR'S MANUAL

The operator's manual provides safety, operating, maintenance, and service information about John Deere machines.

An extra copy of the operator's manual is important if the copy furnished with your machine is misplaced.

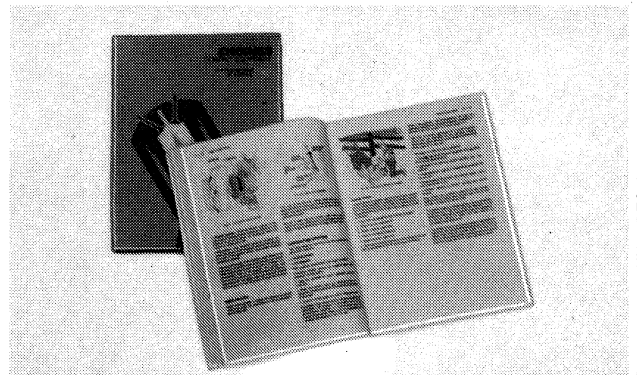


O53,OM -19-27NOV85

TS190 -UN-17JAN89

FUNDAMENTALS OF SERVICE MANUALS

These basic manuals cover most makes and types of machines. FOS manuals tell you how to service machines. Each manual starts with basic theory and is fully illustrated with colorful diagrams and photographs. Both the "whys" and "hows" of adjustments and repairs are covered in this reference library.



O53,CPFOS -19-27NOV85

TS194 -UN-02DEC88

John Deere Service Literature

John Deere Distribution Service Center
Department S/P
P.O. Box 186, Moline, IL 61266-0186

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			x	=
			x	=
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			x	=
			x	=
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FOS Manual—Electrical Systems	FCP-83101B		x	=
FOS Manual—Hydraulics	FCP-82101B		x	=
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SP-317 Jan-87

MX,SLIT -19-01MAY88

John Deere Service Keeps You on the Job



John Deere is at your service when you need it

John Deere takes pride in providing superior service. We'll be around when you need us. To help minimize downtime, we maintain a large and varied parts inventory. Precision tools and testing equipment enable our dealerships to locate and correct troubles quickly. We hold regular training schools for service technicians so they know your equipment and how to maintain it. Our goal is to provide prompt, efficient service through competent dealerships.

Should you experience any difficulty obtaining satisfactory parts or service:

- Discuss your problem with your dealership service manager.
- If still unable to properly resolve, see the dealership manager.
- If you have a persistent problem that your dealership is unable to satisfy, contact the John Deere sales branch in the area in which you live. (See the map below to locate the sales branch.) The sales branch will also help you locate the dealership nearest you.

Sales Branch

1. JOHN DEERE COMPANY
701 Georgeville Road
Columbus, OH 43228
614-275-1500

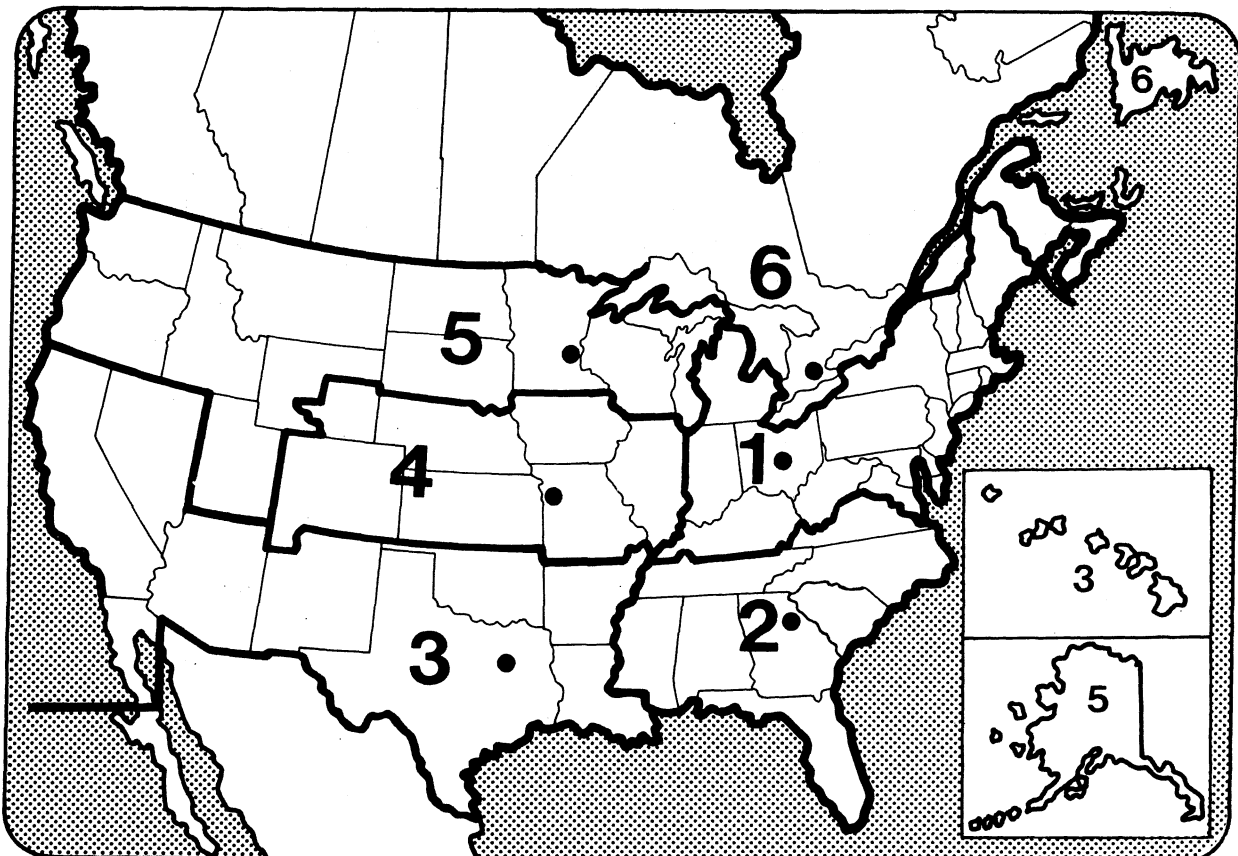
2. JOHN DEERE COMPANY
2001 Deere Dr.
Conyers, GA 30208
404-922-7040

3. JOHN DEERE COMPANY
10650 Hines Boulevard
Dallas, TX 75220-2635
214-352-1701

4. JOHN DEERE COMPANY
3210 East 85th Street
Southeast Station
Kansas City, MO 64132-2586
816-361-4000

5. JOHN DEERE COMPANY
2001 West 94th Street
Bloomington, MN 55431-2311
612-887-6200

6. JOHN DEERE COMPANY
South Service Road at Hunter
Grimsby, Ontario, Canada L3M 4H5
416-945-9281



TS-214 (Jun-89)

O53,IBC,2 -19-01JUN87

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